

Amendments to the Claims:

Please amend claim 38 as follows:

38. (Amended)        A semiconductor laser diode comprising:
- a body of a semiconductor material having therein a waveguide region comprising In and Ga, which is not intentionally doped and which substantially confines photons therein and allows the flow of photons therealong;
  - a quantum well region within the waveguide region for generating an optical mode of photons; and
  - a clad region on each side of the waveguide region, the clad regions being at least partially doped to be of opposite conductivity type;
- wherein said [photon generating means] quantum well region is thinner than the thickness of the waveguide region and is spaced from the clad regions;
- and wherein the thickness of the waveguide regions and the composition of the waveguide and clad regions are such that an overlapping of the optical mode generated in the waveguide region into the clad regions is not greater than about 5%.